

# SUSTAINABILITY REPORT, OWNERSHIP TYPES, AND COST OF CAPITAL: EVIDENCE ON INVESTORS' REACTION OF INDONESIAN LISTED COMPANIES

Raisya Arum Sari<sup>1</sup>, Hilda Rossieta<sup>2\*</sup>

<sup>1,2</sup>Faculty of Economy and Business Universitas Indonesia, Kampus UI, Depok 16424, Indonesia.  
Email: \*hilda.rosieta@ui.ac.id

Article History: Received on 19<sup>th</sup> November 2019, Revised on 19<sup>th</sup> December 2019, Published on 14<sup>th</sup> January 2020

## Abstract

**Purpose:** This research aims to examine investors' reactions to the Sustainability Report (SR) and the moderating effect of ownership types associated with stakeholders' interdependence theory.

**Methodology:** This research uses purposive sampling method to choose the samples. The population of the samples is Indonesian listed companies that disclose sustainability reports from 2014 to 2016. This research uses secondary data using several data sources, such as the annual report, financial report, sustainability report, data stream database, and another secondary source.

**Results:** In general, empirical evidence indicate that investors appreciate sound SR performance by the tendency to give a discount on their investment; hence, they charge low Cost of Capital. Also, types of ownership do have a moderating effect on investors' reaction, suggesting the existence of interdependent among stakeholders group.

**Implications:** This research captures investors' reactions by looking at the Cost of the Capital bear by the company as a proxy for investor reaction on the perceived risk associated with the sustainability issues. Moreover, this research converts the Cost of Capital as a continuous variable into a categorical variable of high and low.

**Keywords:** *Sustainability Report, Investors' Reaction, Ownership Types, Stakeholders' Interdependent, SR performance.*

## INTRODUCTION

From an accounting perspective, going concerns concept is considered as one of the underlying assumptions for corporate reporting practices. Implementation of accrual and deferral concepts are withdrawn from the going concern assumption, which serves as the basis of accounting and reporting of corporate financial performance as the main interest of shareholders. However, global awareness regarding the importance of stakeholders' interest is growing. Arguably, stakeholders' interest is perceived as equally crucial as shareholders' interest, since corporations consume resources from the same planet in which we are all living. However, corporations often pursue high financial growth for the sake of shareholders' interest using natural resources at the cost of ecological sustainability (Sjafjell, 2018). Differ to the going-concerns-concept which focuses mainly on value maximization for shareholders; the sustainability concept concerns with stakeholders' interest in satisfying current human needs without sacrificing the ability of future generations to fulfill their needs (<https://www.un.org/sustainabledevelopment/development-agenda>, 2018).

The issues of sustainability have been embraced by the United Nations through the introduction of the 17 Sustainable Development Goals (SDGs) as the agenda for the world to be realized from 2016 to 2030. With regards to corporate reporting practice of sustainability issues, Global Reporting Initiative (GRI) established in Boston- the USA in 1997, is among non-profit organizations that set the sustainable reporting standard at the global level. The Global Sustainability Standard Board (GSSB) as part of GRI, have launched the first global standard for sustainability in October 2016. The standards allow the organization to report their activities that have an impact on their Economic, Environmental, and Social aspects, and also, the contribution of these activities on sustainable development.

Sjafjell (2018) argue that under the current economic system, there is a potential conflict between corporates aim to reach indefinite economic growth and limited availability of planetary resources. The capital market mechanism allows shareholders to arbitrage (i.e., sale, hold or buy shares) in maximizing their return of investment, particularly in the short run. Consequently, to deliver good returns for investors and maintain high shares price, corporations should achieve stable and continuous growth of financial performance. On the other hand, the issues of sustainability cover quite a long period, even span across generations in the future. Hence, although the costs of corporate sustainability reporting should be bear by the current shareholders, yet, the direct benefit might not be enjoyed by them.

Addressing the potential conflict between the interest of shareholders and the general public as stakeholders, many of previous studies examine, whether corporate report regarding sustainability issues is valued by investors (Felisha and Rossieta, 2017; Gupta, 2018; Jung et al., 2018; Harper Ho, 2018). In reality, investors are also part of stakeholders, which can influence investors' perspectives concerning sustainability issues. Yet, this kind of research is hardly found, if any. This research aims to fill the gap on how equity investors as well as debt investors as part of stakeholders, moderate investors' perspective regarding the risk associated with sustainable issues in terms of cost of capital.

In short, this study has two aims as follows. First, following previous studies (Felisha and Rossieta, 2017; Gupta, 2018; Harper Ho, 2018; Jung et al., 2018), this research investigates the effect of sustainability performance on the Cost of

Capital (i.e., Cost of Equity and Cost of Capital). Mostly, previous studies focused only on investors' interest in the corporate context and overlooked the importance of stakeholders at large. For that reason, the second objective of this research is to examine the moderating effect of ownership types on the association between environmental performance as presented in SR and the cost of capital.

This research is expected to complement the shortcomings of previous studies which focused mainly on investors/shareholders' interest by adding the ownership type as the moderating variable and incorporating the disclosure of sustainability information. The corporate owner could be assumed as having dual memberships of shareholders as well as stakeholders. While SR accommodates more on stakeholders' interest, hence, this research contributes to the better comprehension regarding the link between shareholders' and stakeholders' theory in the corporate context. A better understanding will benefit the company in making appropriate SR policies that are appreciated by both shareholders/investors as well as stakeholders. As for the stakeholders as a whole, including the government, investors, and creditors, the results of this research are expected to be useful for the public policy formulation and decision-making process.

## LITERATURE REVIEW

### 1. Sustainability Report and Equity-Investors' Interest in the Market Economy System

Some scholars argue that in the market economy system, under agency theory, earning profit for shareholders is more important than giving benefits to stakeholders, i.e., the society at large. Therefore, sustainability performance is seen as a threat to profitability since the expense is apparent, yet the return is uncertain. However, some findings from previous research suggest that some form of sustainability performance provide benefit for shareholders beyond direct financial return of their investment ([Faller and Zu Knyphausen-Aufseß, 2018](#)). Consistent with the findings, [Goettsche et al. \(2016\)](#) argue that SR has strategic importance for the companies. Therefore, empirical evidence suggests that SR information has value relevance for shareholders.

The cost of equity is the return of investment demanded by shareholders related to companies' business risk and financial risk (Ross et al., 2012). [Felisha and Rossieta \(2017\)](#) stated that corporate engagement in environmental activity could be perceived as a risky investment due to unclear returns in the future. For this reason, shareholders will demand a premium on their investment, resulting in a high cost of equity. On the other hand, the engagement might also be assumed as reducing the environmental risk in the future. Hence, shareholders will grant a discount on their investment by providing low cost of equity ([Ng and Rezaee, 2015](#)).

Based on the argument regarding corporate sustainability performance and cost of equity above, the first hypothesis suggested is presented below:

**H1:** SR performance is more likely to be associated with the high Cost of Equity.

### 2. Sustainability Report and Debt-investors' Interest in the Market Economy System

[Felisha and Rossieta \(2017\)](#) argue that good environmental performance of companies would reduce the risk of debt covenant. Their argument is referring to legitimacy theory and stakeholder theory, in which companies with bad environmental performance is more prone to litigation risk ([Chen and Roberts, 2010](#)). Hence, debt investors perceive that companies with bad environmental performance have a lower capability to return the borrowings compared to companies with good environmental performance. Accordingly, debt-investor will grant a discount on the cost of debt for the good environmental companies, which then causes a lower cost of debt.

Further, [Felisha and Rossieta \(2017\)](#) stated that environmental investment is usually costly and takes a long time to generate a return. Consequently, companies' cash flow might be distressed; hence, companies' ability to pay the borrowings could be reduced. In this circumstance, debt-investors would ask a premium for their investment by charging a higher cost of debt due to the high risk of debt-covenant violation.

This research argues that the line of arguments of [Felisha and Rossieta \(2017\)](#) on environmental performance is also valid for the sustainability topic addressed by this research. The reason is that the environmental issue is considered as one of the sustainability components covered besides economic and social components. Based on the arguments regarding sustainability performance and the cost of debt, the second hypothesis provided by this research is presented below.

**H2:** High SR performance is more likely to be associated with the High Cost of Debt.

#### a. Ownership Type: The Effect of Stakeholders Interdependence on the Association between Sustainability Report and Cost of Capital.

Based on the instrumental stakeholder theory, [Goettsche et al. \(2016\)](#) provide empirical evidence regarding stakeholders' interdependence. Accordingly, they found that customer profile affects shareholders' perception regarding value relevance of SR. Referring to the study of [Goettsche et al. \(2016\)](#), this research maintains that the case of interdependence clearly exists between the dual role of the corporate owners. In one hand they act as shareholders, but

on the other hand, they also serve as the member of the stakeholders at large. Hence, the owner would have a moderating effect on the association between SR performance and the cost of capital. Further, this research also believes that the moderating effect would be different depending upon the ownership profile.

This study considers the effect of three ownership types, namely: State, Foreign, and Institutional ownership, on the shareholders' perspective regarding sustainability issues. Arguably, these three types of ownership are expected to have a strong moderating effect on the association between sustainability information and the cost of capital. According to Article 33 of the Indonesian Constitution and the Law No. 19 in 2003, the State-Owned Enterprises (SOEs) have dual objectives, namely: to gain maximum profit for the State as majority shareholders, and also, carrying a social obligation for the welfare of people as stakeholders of the State. The dual objective is consistent with the findings of [Ben Lahouel et al. \(2014\)](#) study, which shows that State ownership makes companies have a better understanding of the importance of sustainability performance.

With regard to foreign ownership, as a member of global stakeholders, they are believed to be highly conscious of sustainability issues. Hence, a high concentration of foreign-ownership will put pressure on the company to pay attention to its sustainability performance. This perspective is consistent with the result of [Suto and Takehara \(2017\)](#) study, which found that in the Japanese market, increased foreign ownership will improve disclosure of the environmental performance.

Lastly, institutional ownership is assumed to have higher supervisory capabilities relative to others, including oversight capabilities on corporate SR. Institutional ownership is ownership whose capital funds are managed by non-individual investors such as banks, insurance companies, pension funds, investment companies, and all third parties holding and investing funds for the benefit of their clients ([Johnson and Greening, 1999](#); [Mahoney and Roberts, 2007](#) in [Ben Lahouel et al., 2014](#)). Accordingly, in their research, [Suto, and Takehara \(2017\)](#) found that in the previous studies ([Chaganti and Damanpour, 1991](#); [Graves and Waddock, 1994](#); [Cox et al., 2004](#); [Ben Lahouel et al., 2014](#)) suggested that institutional ownership could encourage corporate managers to improve their environmental performance.

Referring to the agency theory, corporate owners invent oversight functions to minimize symmetric information and reduce the agency cost they have to bear. From the investors' perspective, reduced agency costs might mean low business risk. Hence, they would grant a lower Cost of Capital. Since logically, each type of ownership have different interest and oversight capabilities, this research proposes the following third hypothesis:

**H3a:** Types of ownership are more likely to be associated with the high Cost of Equity.

**H3b:** Types of ownership are more likely to be associated with the High Cost of Debt.

Considering the stakeholders' interdependence argument, and also the effect of the different profile of ownership type on the association between SR performance and cost of capital, this research proposed the fourth hypotheses as follows:

**H4:** Type of ownership moderate the likelihood of association between SR performance and high Cost of Equity.

This research further investigates the association between costs of equity with the components of SR as presented below:

**H4a:** State ownership moderate the likelihood of association between SR performance and high Cost of Equity.

**H4b:** Foreign ownership moderates the likelihood of association between SR performance and high Cost of Equity.

**H4c:** Institutional ownership moderates the likelihood of association between SR performance and high Cost of Equity.

With regards to the Cost of Debt, this research proposes the following hypotheses:

**H5:** Type of ownership moderate the likelihood of association between SR performance and high Cost of Debt.

**H5a:** State ownership moderate the likelihood of association between SR performance and high Cost of Debt.

**H5b:** Foreign ownership moderates the likelihood of association between SR performance and the high Cost of Debt.

**H5c:** Institutional ownership moderates the likelihood of association between SR performance and the high Cost of Debt.

## METHODOLOGY

### *Sample*

This research uses a purposive sampling method to choose the samples. The population of the samples is Indonesian listed companies that disclose sustainability reports from 2014 to 2016. Sample selection criteria are as below:

1. Listed on Indonesian Stock Exchange at least since 2014;
2. Have a financial report and an annual report at least since 2014;
3. Publish a sustainability report at least since 2014;
4. Have the complete data required for the research variable.

## Type and Source of the Data

This research uses secondary data using several data sources, such as the annual report, financial report, sustainability report, data stream database, and another secondary source.

## Research Models

This research uses binary logistic regression, which classified the Cost of Capital into low and high categories. The binary logistic regression is used to capture better the contrast of investors' reaction on the SR performance, in which low COC indicate the good reaction by giving a discount, on the other hand, high COC represents the bad reaction by asking more return for their investment. Two groups of Models are presented to test the hypotheses.

The following Models are testing the association of COE/COD with SR performance and Ownership Type.

- Model 1a/b : Overall SR Performance and Ownership Type on COE/D

$$\text{Prob. (COE}_{it}/D_{it}=1) = f(\alpha + \beta_1 \text{SR}_{it} + \beta_2 \text{OWN\_STATE}_{it} + \beta_3 \text{OWN\_FOREIGN}_{it} + \beta_4 \text{OWN\_INST}_{it} + \beta_8 \text{LEV}_{it} + \beta_9 \text{SIZE}_{it} + \beta_{10} \text{MTB}_{it} + \beta_{11} \text{INTCOV}_{it} + \varepsilon_{it}) \dots (1a/b)$$

- Model 2a/b : Overall SR Performance, Ownership Type and its Moderating Effect on COE/D

$$\text{Prob. (COE}_{it}/D_{it}=1) = f(\alpha + \beta_1 \text{SR}_{it} + \beta_2 \text{OWN\_STATE}_{it} + \beta_3 \text{OWN\_FOREIGN}_{it} + \beta_4 \text{OWN\_INST}_{it} + \beta_5 \text{SR} * \text{OWN\_STATE}_{it} + \beta_6 \text{SR} * \text{OWN\_FOREIGN}_{it} + \beta_7 \text{SR} * \text{OWN\_INST}_{it} + \beta_8 \text{LEV}_{it} + \beta_9 \text{SIZE}_{it} + \beta_{10} \text{MTB}_{it} + \beta_{11} \text{INTCOV}_{it} + \varepsilon_{it}) \dots (2)$$

- Model 3a/b : Components of SR Performance, Ownership Type and its Moderating Effect on COE/D

## Economic components of SR (SR-eco) Model

$$\text{Prob. (COE}_{it}/D_{it}=1) = f(\alpha + \beta_1 \text{SR-eco}_{it} + \beta_2 \text{OWN\_STATE}_{it} + \beta_3 \text{OWN\_FOREIGN}_{it} + \beta_4 \text{OWN\_INST}_{it} + \beta_5 \text{SR-eco}_{it} * \text{OWN\_STATE}_{it} + \beta_6 \text{SR-eco}_{it} * \text{OWN\_FOREIGN}_{it} + \beta_7 \text{SR-eco}_{it} * \text{OWN\_INST}_{it} + \beta_8 \text{LEV}_{it} + \beta_9 \text{SIZE}_{it} + \beta_{10} \text{MTB}_{it} + \beta_{11} \text{INTCOV}_{it} + \varepsilon_{it}) \dots (2a)$$

## Environmental components of SR (SR-env) Model:

$$\text{Prob. (COE}_{it}/D_{it}=1) = f(\alpha + \beta_1 \text{SR-env}_{it} + \beta_2 \text{OWN\_STATE}_{it} + \beta_3 \text{OWN\_FOREIGN}_{it} + \beta_4 \text{OWN\_INST}_{it} + \beta_5 \text{SR-env}_{it} * \text{OWN\_STATE}_{it} + \beta_6 \text{SR-env}_{it} * \text{OWN\_FOREIGN}_{it} + \beta_7 \text{SR-env}_{it} * \text{OWN\_INST}_{it} + \beta_8 \text{LEV}_{it} + \beta_9 \text{SIZE}_{it} + \beta_{10} \text{MTB}_{it} + \beta_{11} \text{INTCOV}_{it} + \varepsilon_{it}) \dots (2b)$$

## Social components of SR (SR-soc) Model:

$$\text{Prob. (COE}_{it}/D_{it}=1) = f(\alpha + \beta_1 \text{SR-soc}_{it} + \beta_2 \text{OWN\_STATE}_{it} + \beta_3 \text{OWN\_FOREIGN}_{it} + \beta_4 \text{OWN\_INST}_{it} + \beta_5 \text{SR-soc}_{it} * \text{OWN\_STATE}_{it} + \beta_6 \text{SR-soc}_{it} * \text{OWN\_FOREIGN}_{it} + \beta_7 \text{SR-soc}_{it} * \text{OWN\_INST}_{it} + \beta_8 \text{LEV}_{it} + \beta_9 \text{SIZE}_{it} + \beta_{10} \text{MTB}_{it} + \beta_{11} \text{INTCOV}_{it} + \varepsilon_{it}) \dots (1c)$$

Description and Measurement of Variables are presented below.

## Dependent Variables

COE	=	Cost of Equity, Dummy variable, measured by CAPM, equal one if the value is higher than the average, and 0 otherwise.
COD	=	Cost of Debt, Dummy variable, measured by Weighted Average of Interest Expense, given one if the value higher the average and 0 otherwise.

## Independent Variables

SR	=	Sustainability Report (SR) performance, measured by numbers of items disclosed by the company in the SR divided by numbers of all items that could be disclosed
SR-eco	=	by GRI 2016 standards;
SR-env	=	The economic component of SR performance, measured by numbers of economic-related items disclosed by the company in the SR divided by all economic items that could be disclosed by GRI 2016 standards;
SR-soc	=	The environmental component of SR performance, measured by numbers of environment-related items disclosed by the company in the SR divided by all environment items that could be disclosed by GRI 2016 standards;
	=	The social component of SR performance, measured by numbers of related social items disclosed by the company in the SR divided by social items that should be disclosed by GRI 2016 standards.

### Moderating Variables

OWN_STATE	=	State ownership, measured by % of state ownership;
OWN_FOREIGN	=	Foreign ownership, measured by % of foreign ownership;
OWN_INST	=	Institutional ownership, measured by % of institutional ownership;

### Control Variables

LEV	=	Leverage, the ratio of total debt to total equity of the firm;
MTB	=	Market value to book value, the ratio of market share price with a book value of the company;
SIZE	=	Company size, the natural logarithm of total assets of the company;
INTCOV	=	Interest coverage, the ratio of EBIT plus interest expense divided by interest expense.

## DISCUSSION

### Descriptive Statistics

One hundred fifty-five firm-year observations have been identified based on sample selection criteria. However, 2 of the observations are losses companies, which have unique circumstances compared to others; hence, they are excluded from the sample. The final number of observations for this research is 113 firm-years. Table 1 below presents the statistic descriptive for all of the variables included in the Empirical Model.

**Table 1:** Statistics-Descriptive Table

Variable Name (N=113)	Mean	Median	Mode	Std. Dev.	Min.	Max
Cost of Equity	0.167	0.162	0.166	0.066	0.056	0.367
Cost of Debt	0.057	0.056	0	0.038	0	0.215
SR	0.356	0.338	0.273	0.17	0.052	0.935
SR-eco	0.075	0.078	0.052	0.035	0	0.156
SR-env	0.117	0.104	0.091	0.082	0	0.337
SR-soc	0.164	0.143	0.064	0.088	0.026	0.403
State Ownership	0.245	0	0	0.307	0	0.8
Foreign Ownership	0.514	0.386	0.13	0.36	0.003	0.983
Institutional Ownership	0.103	0.071	0.04	0.106	0	0.658
Size	24.59	24.326	21.448	1.385	21.448	27.663
Leverage	0.406	0.395	0	0.309	0	2.634
MTB	3.416	1.45	0.91	8.977	0.05	71.61

The descriptive statistic shows that companies disclose only 35.5% of the total numbers of items that ideally could be disclosed based on the GRI 2016 Standard. When looking at SR components, companies tend to disclose Social information more compared to Environmental and Economic information. For the Ownership type, foreign ownership has the highest percentage, followed by State ownership and lastly institutional ownership.

**Table 2:** Frequency Distribution of COE and COD

Performance	COE			COD		
	Freq.	Percentage (%)	Cumulative (%)	Freq	Percentage (%)	Cumulative (%)
Low = 0	64	55.7	55.7	61	53.04	53.04
High = 1	51	44.3	100	54	49.96	100
Total	115	100		115	100	

Table 2 shows that companies belong to the High COE group (44.3%) are slightly lower than those who belong to the Low COE group (55.7%). COD has the same pattern with COE, in which the percentage of the High COD group (49.96 %) is slightly lower than the Low COD group (53.04). The proportion of the High and Low group in the sample data is almost balanced, suggesting that for the hypotheses testing, the data fit binary logistic regression statistic.



### Empirical Findings and Interpretation

Table 3 present the empirical result of Model 1, hypotheses testing for H1 to H3 regarding the association between COE/COD with SR and Ownership Type.

**Table 3:** Regression Result of Model 1 to test the hypotheses of H1, H2, H3

Independent Variables	Prob (COE/COD=1) = $f(\beta_0 + \beta_1 \text{ SR} + \beta_2 \text{ OWN\_STATE} + \beta_3 \text{ OWN\_FOREIGN} + \beta_4 \text{ OWN\_INST} + \beta_5 \text{ LEV} + \beta_6 \text{ SIZE} + \beta_7 \text{ MTB} + \varepsilon)$				
	Cost of Capital				
	Model 1a		Model 1b		
	Cost of Equity		Cost of Debt		
	Coefficient	Odds Ratio	Coefficient	Odds Ratio	
Constant	-0,452	0,636	14,966	** *	3158408
SR	-3,875	** *	0,021	-2,614	** *
OWN_STATE	1,373	*	3,946	1,608	*
OWN_FOREIGN	-1,272	*	0,280	2,237	** *
OWN_INST	4,226	**	68,449	0,463	1,589
Variable Control					
SIZE	0,065	1,067	-0,654	** *	0,520
LEV	0,095	1,100	0,233		1,262
MTB	-0,076	0,927	0,097		1,102
Hosmer and Lemeshow - Goodness of Fit Test	22,20%		15,41%		
McFadden's Pseudo R Square	25,82%		23,51%		
Overall Significance Test (F Test)	0,001		0,001		
Overall Percentage Correct - The Model	68,14%		68,14%		
***: sig at $p \leq 1\%$ ; **: sig at $p \leq 5\%$ ; *sig at $p \leq 10\%$					
Dependent Var: Prob (COE = 1) shows cost of equity measured by CAPM, given 1 if the cost of equity is more than the mode and 0 if it is lower than the mode, Prob (COD = 1) shows cost of debt measured by weighted average of interest expense, given 1 if cost of debt is more than the mode and 0 if it is lower than the mode.					
Independent Var: (i) SR: Disclosure of sustainability report, measured by comparing the items disclosed by the company in the report with items that should be disclosed in accordance to GRI 2016 standards; (ii) OWN_STATE: State ownership, percentage of shares owned by the State in the company; (iii) OWN_FOREIGN: Foreign ownership, percentage of shares owned by foreign investors; (iv) OWN_INST: Institutional ownership, percentage of shares owned by institution; (v) SIZE: Company size, natural logarithm of total assets of the company; (vi) LEV: Leverage, the ratio of total debt to total equity of the firm; (vii) MTB: Market value to book value, ratio of market share price with book value of company, (viii) INTCOV: Interest coverage, ratio of EBIT plus interest expense divided by interest expense.					

Table 3 suggest Model 1 shows that SR performance is negatively associated with the likelihood of high COC (for COE, coeff. reg. = -3.875 at p-value < 1%, and -2.614 at p-value < 5% for COD). Therefore, the empirical results of data testing are consistent with H1 and H2. This means that both equity investors, as well as debt-investor, perceive SR information as indications of reducing the sustainability risk in the future, hence, provide a discount on their investment by giving a lower cost of capital ([Chen and Roberts, 2010](#); [Ng and Rezaee, 2015](#); [Felisha and Rossieta, 2017](#)).

With regards to the effect of ownership types COC, the empirical results show that the variables are associated with the likelihood of high COC, consistent with H3. Specifically, for COE Institutional investors show the strongest positive effect on the likelihood of high COE (coeff. reg.= +4.226 at p-value < 5%), while on COD, the position is attributed to Foreign ownership (coeff. reg.= +2.237 at p-value < 1%). This means that a higher proportion of particular ownership types (i.e., Institutional investors for COE and Foreign investors for COD) increase the likelihood of a high Cost of Capital sharply. Interestingly, Institutional ownership does not have any association with COD. Presumably, debt

investors do not need sophisticated oversight capability attributed to Institutional owner, since they could ask the information they need directly to management for monitoring purposes. Overall, the empirical results suggest that although investors appreciate high SR coverage by providing lower COC, yet, they perceive Ownership type to be more important for their investment decisions, as indicated by the value of coeff. regression as well as odds ratio for each variable.

Table 4 exhibits the empirical result of Model 2 to test the moderating effect of Ownership type on the associations between SC and the likelihood of high COC as suggested by H4 for COE and H5 for COD.

**Table 4:** Regression Result of Model 2 to test the Hypotheses of H4 and H5

Independent Variables	Prob (COE/COD=1) = $f(\beta_0 + \beta_1 \text{SR} + \beta_2 \text{OWN\_STATE} + \beta_3 \text{OWN\_FOREIGN} + \beta_4 \text{OWN\_INST} + \beta_5 \text{SR X OWN\_STATE} + \beta_6 \text{SR X OWN\_FOREIGN} + \beta_7 \text{SR X OWN\_INST} + \beta_8 \text{LEV} + \beta_9 \text{SIZE} + \beta_{10} \text{MTB} + \varepsilon)$					
	Cost of Capital					
	Model 2a			Model 2b		
	Cost of Equity			Cost of Debt		
	Coefficient	Odds Ratio		Coefficient	Odds Ratio	
Constant	-0,569	0,566		21,531	** * 10 <sup>9</sup>	x
SR	-4,551	** 0,011		-16,773	** *	0,000
OWN_STATE	2,818	** 16,744		-5,114	**	0,006
OWN_FOREIGN	-1,857	** 0,156		-0,725		0,485
OWN_INST	1,572	** *	4,817	-3,324		0,036
SR*OWN_STATE	-3,681	* 0,025		22,745	** *	7,55E+09
SR*OWN_FOREIGN	1,983	* 7,268		12,347	**	2,30E+05
SR*OWN_INST	8,731	** 6191		15,064		3,48E+06
Control Variables						
SIZE	0,080	1,084		-0,786	** *	0,456
LEV	0,006	1,006		0,425		1,529
MTB	-0,097	0,908		0,259		1,295
Hosmer and Lemeshow - Goodness of Fit Test	60,16%			37,49%		
McFadden's Pseudo R Square	22,04%			25,20%		
Overall Significance Test (F Test)	0,000			0,000		
Overall Percentage Correct - The Model	69,03%			69,03%		
***: sig at p<=1%; **: sig at p<=5%; *sig at p<=10%						
Dependent Var: Prob (COE = 1) shows cost of equity measured by CAPM, given 1 if the cost of equity is more than the mode and 0 if it is lower than the mode, Prob (COD = 1) shows cost of debt measured by weighted average of interest expense, given 1 if cost of debt is more than the mode and 0 if it is lower than the mode.						
Independent Var: (i) SR: Disclosure of sustainability report, measured by comparing the items disclosed by the company in the report with items that should be disclosed in accordance to GRI 2016 standards; (ii) OWN_STATE: State ownership, percentage of shares owned by the State in the company; (iii) OWN_FOREIGN: Foreign ownership, percentage of shares owned by foreign investors; (iv) OWN_INST: Institutional ownership, percentage f shares owned by institution; (v) SIZE: Company size, natural logarithm of total assets of the company; (vi) LEV: Leverage, the ratio of total debt to total equity of the firm; (vii) MTB: Market value to book value, ratio of market share price with book value of company.						

---

Moderate Var: (i) SRXOWN\_STATE: Interaction of state ownership with the disclosure of sustainability report, multiplication of sustainability report with state ownership; (ii) SRXOWN\_FOREIGN: Interaction of foreign ownership of disclosure of sustainability report, multiplication of disclosure of sustainability report with foreign ownership; (iii) SRXOWN\_INST: Interaction of institutional ownership of disclosure of sustainability report, multiplication of sustainability report with institutional ownership.

---

Table 4 above shows that in general, Ownership types do have a moderating effect on the association between SR and the likelihood of high COC for both COE and COD. The moderating effect is demonstrated by the change of the coeff. reg. as well as their significance of SR by itself (for COE, coeff. reg.= -4.551 at p-value <

5% and -16.773 at p-value <1% for COD) compared to SR with the moderating effect of Ownership types (i.e., SR-eco\*OWN\_STATE, SR-env\*OWN\_FOREIGN, and SR-eco\*OWN\_INST, in both COE and COD Model). Therefore, H4 and H5 are supported by the empirical results of data testing. This means that Ownership type has an important role that affects investors' perception ([Ben Lahouel et al., 2014](#); [Suto and Takehara, 2017](#)) regarding the usefulness of SR as indicators of environmental risk as well as business risk ([Chen and Roberts, 2010](#); [Felisha and Rossieta, 2017](#)).

Further investigations regarding the specific effect of SR components (i.e., Economic, Environment and Social aspect – the Table reactions in Appendix 1) shows that shareholders slightly appreciate SR environmental performance by giving lower Cost of Equity (i.e., coeff. reg. of SR-env = -20.186, significant at p-value <10% at COE model). However, with regards to the moderating effect, State ownership is interesting more on SR Economic component (i.e., coeff. reg. of SR-Eco by itself is not significant, but become weakly significant at 10% in AR-eco\*OWN\_STATE variable).

With regards to the empirical evidence of COD Model, almost all the SR Components have negative association with the likelihood of high COD (i.e., coeff. reg. of SR-eco = -73.471 significant at p <1%; coeff. reg. of SR-env = -34.951 significant at p <5%; coeff. reg. of SR-soc = -29.383 significant at p <1%). This means that debt-holders value all the components of SR performance by the tendency to give a lower Cost of Debt. However, the moderating effects of Ownership types are differed across SR components, indicating that each owner has specific and different interests on the SR components.

## CONCLUSION

Referring to the agency theory as well as the instrumental stakeholders' theory ([Goettsche et al., 2016](#)), this study has two purposes. These are: first to investigate whether SR performance is valued by investors, and second, whether Ownership type has a moderating effect on the investors' perceived value of SR performance.

Using 113 firm-year observation drawn from Indonesian Listed companies that publish SR, this study proposes 5 Hypotheses that are tested by binary logistic regression statistical technique.

With regards to the first objective of the study, the empirical results suggest that both Equity investors, as well as Debt investors, valued SR performance by their tendency to provide lower Cost of Capital. To some extent, the results are consistent with previous studies such as [Faller and Zu Knyphausen-Aufseß \(2018\)](#); [Felisha and Rossieta \(2017\)](#); [Goettsche et al., \(2016\)](#); and [Ng and Rezaee \(2015\)](#).

Concerning the second study objectives, consistent with the interdependent theory of stakeholders ([Goettsche et al., 2016](#)), this research finds that Ownership types have a moderating effect on investors' perceptions regarding the companies' risk exposures stated in high/low Cost of Fund. Some of the previous studies, among others, are done by [Ben Lahouel et al. \(2014\)](#). Also, [Suto & Takehara \(2017\)](#) have consistent findings with this research.

The findings of this study have several contributions. Conceptually, this study provides empirical evidence regarding the importance of SR performance for investors. To some extent, the findings provide some empirical evidence which refutes [Sjafjell's \(2018\)](#) concern regarding the potential conflict between the current economic system which motivates companies to reach indefinite growth to satisfy investors, with the scarce resources of the planet. Also, the findings also increase the comprehension regarding the interdependence of stakeholders' theory ([Goettsche et al., 2016](#)), in which investors as part of the stakeholders could also influence the perceptions regarding SR performance.

The conceptual contributions have some practical implications. First, despite the potential conflict between current economic systems that drive unlimited companies' growth and limited resources in the planet argued by [Sjafjell \(2018\)](#), the empirical evidence shows that investors tend to charge lower Cost of Capital for sound SR performance. This would provide the real economic incentive for companies to practice SR. More specifically, the empirical evidence indicates that Equity investors valued the SR environment, while Debt-investors appreciate almost all SR components. Moreover, increased understanding of stakeholders' interdependence and the way they influence each other could provide strategic guidance for companies to build positive public perception of SR performance, besides the well establish financial performance.

## LIMITATION AND FUTURE RESEARCH DIRECTIONS

SR is considered relatively new in Indonesia, hence generalization regarding the conclusion and interpretation drawn



from the empirical evidence is limited. Increased generalization could be done in the future using samples across countries and contexts.

Also, this research uses a simple proxy for SR performance, namely: percentage of the item covered for each SR components (i.e., Economic, Environment and Social component), relative to the whole item covered by each component, without considering the richness of the content. Future research should examine more in-depth the SR content to capture the complexity of the issues, hence, resulting in better comprehension regarding the phenomena.

This research captures investors' reactions by looking at the Cost of the Capital bear by the company as a proxy for investor reaction on the perceived risk associated with the sustainability issues. Moreover, this research converts the Cost of Capital as a continuous variable into a categorical variable of high and low. To capture the investors' reactions, the research in the future could do the triangulation method to increase the internal validity of the research, such as examination of market reaction to certain news associated with sustainability issues, using questioner to capture investors' views, interviewing to capture the richness of the issues.

## REFERENCES

1. Ben Lahouel, B., Peretti, J. M., & Autissier, D. (2014). Stakeholder power and corporate social performance: The ownership effect. *Corporate Governance*, 14(3): 363-381. <https://doi.org/10.1108/CG-07-2012-0056>
2. Chaganti, R., and Damanpour, F. (1991). Institutional Ownership, Capital Structure, and Firm Performance. *Strategic Management Journal*, 12(7): 479-491. <https://doi.org/10.1002/smj.4250120702>
3. Chen, J.C., & Roberts, R.W. (2010). Towards a more coherent understanding of the organization-society relationship: A theoretical consideration for social and environmental accounting research. *Journal of Business Ethics*, 97 (4): 651-665. <https://doi.org/10.1007/s10551-010-0531-0>
4. Cox, P., Brammer, S., and Millington, A. (2004). An Empirical Examination of Institutional Investor Preferences for Corporate Social Performance. (2004). *Journal of Business Ethics*, 52(1): 27-43. <https://doi.org/10.1023/B:BUSI.0000033105.77051.9d>
5. Faller, C.M. & Zu Knyphausen-Aufseß, D. (2018). Does Equity Ownership Matter for Corporate Social Responsibility? A Literature Review of Theories and Recent Empirical Findings. *Journal of Business Ethics*, 150(1):15-40. <https://doi.org/10.1007/s10551-016-3122-x>
6. Felisha and Rossieta, H. (2017). Is Environmental Performance Valued by Investors? - The Case of Indonesian Listed Companies. *Advances in Economic, Business and Management Research (AEBMR)*, Vol. 55 – 6<sup>th</sup> International Accounting Conference (IAC 2017). <https://doi.org/10.2991/iac-17.2018.46>
7. Firer, C., Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2012). *Fundamentals of corporate finance*. McGraw-Hill Higher Education.
8. Gallego-Álvarez, I., Quina-Custodio, I.A. (2017). Corporate Social Responsibility Reporting and Varieties of Capitalism: an International Analysis of State-Led and Liberal Market Economies. *Corporate Social Responsibility and Environmental Management*, 24(6): 478-495. <https://doi.org/10.1002/csr.1421>
9. García-Sánchez, I. M., & Noguera-Gámez, L. (2017). Integrated information and the cost of capital. *International Business Review*, 26(5) : 959-975. <https://doi.org/10.1016/j.ibusrev.2017.03.004>
10. Goettsche, M., Steindl, & T., Gietl, S. (2016). Do Customers Affect the Value Relevance of Sustainability Reporting? Empirical Evidence on Stakeholder Interdependence. *Business Strategy and the Environment*, 25(3):149-164. <https://doi.org/10.1002/bse.1856>
11. Gupta, K. (2018). Environmental sustainability and implied cost of equity: international evidence. *Journal of Business Ethics*, 147 (2): 343-365. <https://doi.org/10.1007/s10551-015-2971-z>
12. Harper Ho, V.. (2018). Nonfinancial risk disclosure and the costs of private ordering. *American Business Law Journal*, 55 (3): 407-474. <https://doi.org/10.1111/ablj.12123>
13. Hsu, C. H., Lai, S. C., & Li, H. C. (2016). Institutional ownership and information transparency: Role of technology intensities and industries. *Asia Pacific Management Review*, 21(1): 26-37. <https://doi.org/10.1016/j.apmr.2015.06.001>
14. Hu, Y., Zhu, Y., Tucker, J., & Hu, Y. (2017). Ownership influence and CSR disclosure in China. *Accounting Research Journal*. <https://doi.org/10.1108/ARJ-01-2017-0011>
15. Johnson, Richard A., and Greening, Daniel W. (1999). The Effect of Corporate Governance and Institutional Ownership Types on Corporate Social Performance. *The Academy of Management Journal*, 42 (5): 564 – 576. <https://doi.org/10.2307/256977>
16. Jung, J., Herbohn, K., & Clarkson, P. (2018). Carbon Risk, Carbon Risk Awareness, and the Cost of Debt Financing. *Journal of Business Ethics*, 150(4): 1151-1171. <https://doi.org/10.1007/s10551-016-3207-6>
17. Li, S., & Liu, C. (2018). Quality of Corporate Social Responsibility Disclosure and Cost of Equity Capital: Lessons from China. *Emerging Markets Finance and Trade*, Mar: 2472-2494. <https://doi.org/10.1080/1540496X.2018.1443441>
18. Mahoney, Lois S., and Roberts, Robin W. (2007). Corporate Social Performance, Financial Performance, and Institutional ownership in Canadian Firms. *Accounting Forum*, 31 (3): 233-253. <https://doi.org/10.1016/j.accfor.2007.05.001>

19. Nagata, K., & Nguyen, P. (2017). Ownership structure and disclosure quality: Evidence from management forecasts revisions in Japan. *Journal of Accounting and Public Policy*, 36(6): 451-467. <https://doi.org/10.1016/j.jaccpubpol.2017.09.003>
20. Ng, A.C. & Rezaee, Z. (2015). Business sustainability performance and the cost of equity capital. *Journal of Corporate Finance*, 34: 128-149. <https://doi.org/10.1016/j.jcorpfin.2015.08.003>
21. Saleh, M., Zulkifli, N., & Muhamad, R. (2010). Corporate social responsibility disclosure and its relation to institutional ownership: Evidence from public listed companies in Malaysia. *Managerial Auditing Journal*, 25(6): 591-613. <https://doi.org/10.1108/02686901011054881>
22. Sjøfjell, Beate. (2018). Redefining the Corporation for Sustainable New Economy. *Journal of law and Society*, 45 (1): 29-45. <https://doi.org/10.1111/jols.12077>
23. Suto, M., & Takehara, H. (2017). CSR and cost of capital: evidence from Japan. *Social Responsibility Journal*, 13(4), 798-816. <https://doi.org/10.1108/SRJ-10-2016-0170>
24. Tarigan, J., & Samuel, H. (2015). Pengungkapan Sustainability Report dan Kinerja Keuangan. *Jurnal Akuntansi dan Keuangan*, 16(2): 88-101. <https://doi.org/10.9744/jak.16.2.88-101>
25. Graves, S.B., and Waddock, S. (1994). Institutional Owners and Corporate Social Performance. *The Academy of Management Journal*, 37(4): 1034 – 1046. <https://doi.org/10.5465/256611>
26. <https://www.un.org/sustainabledevelopment/development-agenda/> accessed at Agustus 2018